



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,978	03/31/2004	Erich Mattmann	502901-173	5918
27799	7590	07/26/2005	EXAMINER	
COHEN, PONTANI, LIEBERMAN & PAVANE 551 FIFTH AVENUE SUITE 1210 NEW YORK, NY 10176			JENKINS, JERMAINE L	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

13

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,978	<b>Applicant(s)</b> MATTMANN, ERICH	
	<b>Examiner</b> Jermaine Jenkins	<b>Art Unit</b> 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB08)<br>Paper No(s)/Mail Date <u>09222004</u> | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Objections*

2. Claim 1 is objected to because of the following informalities: In claim 1-line 12, after "technique", the word - - an - - should be replaced with the word - - and - -. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-12 & 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ratell et al (EP 0911623A2).

In regards to claim 1, Ratell et al teaches a pressure sensor comprising support (22), a membrane (26, i.e. diaphragm) having first and second opposing sides and a radially peripheral edge region, said membrane (26) being made of an electrical conducting metal, said radially peripheral edge region being fixed relative to said

Art Unit: 2855

support (See Figures 1 & 2), and one of the first and second opposing sides being arranged for facing a medium such that the membrane (26) is deflective relative to the pressure of the medium (Column 4, lines 19-26 & Column 5, lines 8-28), an insulating layer (18, i.e. sensing element) having a first side and a second side, wherein the first side of the insulating layer (18) is arranged on the membrane (26) (See Figure 2), and measuring elements (i.e. resistor strain gauge) and an electric circuit (24) interconnecting the measuring elements (i.e. resistor strain gauge) being applied on the second side of the insulating layer (18) by a thick-film technique and sintered the second side by a thermal process (See Figure 2), the measuring elements (i.e. resistor strain gauge) and the electric circuit (24) being arranged for determining the pressure of the medium, the insulating layer consisting of a material having a coefficient of expansion that lies between the coefficient of expansion of the metal of the membrane and the coefficient of expansion of the measuring elements (i.e. resistor strain gauge) and the electric circuit (24) (Column 7, lines 8-15).

With regards to claim 2, Ratell et al teaches the electric circuit (24) interconnecting the measuring elements forms a Wheatstone measuring bridge (Column 6, lines 13-16).

With regards to claim 3, Ratell et al teaches the measuring elements are strain gages (Column 4, lines 5-8).

With regards to claims 4-6, Ratell et al teaches insulating layer comprises a plurality of layers (28, 34, 36, 38) lying one on top of the other arranged on the membrane (26), wherein the one of the plural layers (28, 34, 36, 38) lying furthest away

Art Unit: 2855

from the membrane (26) bears the measuring elements and the electric circuit (24), wherein each of the plural layers (28, 34, 36, 38) has a coefficient of expansion which lies between the coefficient of expansion of the metal of the membrane (26) and the coefficient of expansion of the measuring elements and the electric circuit (24) (Column 7, lines 8-15)

With regards to claim 7, Ratell teaches the membrane (26) comprises a stainless steel membrane (Column 3, lines 52-56).

With regards to claim 8, Ratell teaches the stainless steel membrane (26) comprises a stainless steel sheet having a thickness of approximately 0.1mm to 0.6mm (Column 6, lines 46-50).

With regards to claims 9-12, Ratell teaches wherein each of the plural layers (28, 34, 36, 38) consists of a dielectric paste printed onto the membrane (26) or a lower one of the plural layers (28, 34, 36, 38) and is fired in a thermal process (Column 7, lines 12-15).

With regards to claims 16-18, Ratell teaches wherein the radially peripheral edge region of the membrane (26) is welded to the support (Column 6, lines 21-26)

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2855

6. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ratell et al (EP 0911623A2) in view of Klun et al (6,308,574).

With respect to claims 13-15, Ratell et al teaches the claimed invention except for one of electrical and electronic components of an evaluation unit connected to the electric circuit and arranged on the side of the membrane bearing the measuring elements and the electronic circuit.

Klun et al teaches a pressure sensor having one of electrical and electronic components of an evaluation unit connected to the electric circuit and arranged on the side of the membrane (11) bearing the measuring elements (not shown) and the electronic circuit (110) (Column 3, lines 1-7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an evaluation unit on the membrane as taught by Klun et al into the pressure sensor of Ratell et al for the purpose of storing and reading measured values when the pressure sensor is disconnected from the pressure medium for a selected period of time (Klun et al; Column 1, 29-38).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent 5,231,301 (Peterson et al) – Semiconductor Sensor with Piezoresistors and Improved Electrostatic Structures

Art Unit: 2855


- U.S. Patent 5,186,055 (Kovacich et al) – Hermetic Mounting System for a Pressure Transducer
- U.S. Patent 4,726,232 (Koneval) – Temperature Coefficient Compensated Pressure Transducer
- U.S. Patent 4,019,388 (Hall II et al) – Glass To Metal Seal

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 571-272-2179. The examiner can normally be reached on Monday-Thursday 7am-530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermaine Jenkins  
A.U. 2855



William Oen  
Primary Examiner